ESTABLISHING A FARM IN CANADA

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S.W. Garland

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This publication replaces 1242, Starting Farming in Canada.

PREFACE

This publication has been prepared to provide information on capital investments, incomes and expenses on some typical farms in Canada. It should be useful to people in other countries who are interested in farming in Canada, to Canadian farmers who wish to move from one region to another, and to people in other occupations who are considering starting farming.

The information given here will not answer all the questions a prospective farmer might ask; that would be impossible in a publication of this type. Differences between regions and types of farms are too many. Then, too, people who purchase farms do not all have the same end in view. Some wish to make farming a full-time occupation; some are interested in obtaining a net income from farming operations to supplement income from other sources; and others are looking for a place to retire, or simply want to live in the country while earning their living in an occupation other than farming.

We acknowledge the extensive use of published and unpublished material from many sources, particularly in the sections dealing with the business organization of Canadian farms. We are indebted to staff members of the regional offices of the Economics Branch who supplied material: G.C. Retson, Truro, Nova Scotia; M. Ragush, Regina, Saskatchewan; and B.K. Acton, Vancouver, British Columbia

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Establishing a successful farm business in Canada is a difficult and complex task. Land, machinery, livestock and other capital requirements, plus managerial ability, must be organized into an efficiently operating farm unit. Changing technology, increasing capital requirements and changing economic conditions make the task more and more difficult. Land suitable for agricultural production is limited and has been largely brought under cultivation. The increasing need of an expanding population for land for such things as highways, factories, schools and residential areas adds to the complexity of the problem.

The farm on which the operator and his family do the managing, take the financial risks and do most of the work, is still the dominant unit of agriculture in Canada. However, farms are getting larger, fewer in number, requiring more capital, and becoming more specialized. The commercial family farm is a business venture comparable with many substantial establishments of other types of business in size of operation, financial risks involved, and requirements of capital, technical skill and management ability.

DISTRIBUTION OF FARMLAND IN CANADA

Farming in Canada is confined largely to a narrow strip along the United States border. Of the country's total land area of 2,279 millions acres, only 174 million acres are in farms, of which 109 million acres are improved. About 69 million acres of the improved land are in crops each year; 11 million acres are in improved pasture; 27 million acres are in summerfallow; and 2 million acres are used for other purposes.

The Atlantic Provinces of Newfoundland, Prince Edward Island, Nova Scotia and New Brunswick together have 4.6 million acres of land in farms, Quebec has 12.9 million acres, Ontario 17.8 million, British Columbia 5.3 million, and the Prairie Provinces of Manitoba, Saskatchewan and Alberta 133.5 million acres. There are about 4,000 acres of land in farms in the Yukon and Northwest Territories.

FINDING A FARM TO PURCHASE OR RENT

Most of the farms in Canada are privately owned and the beginning farmer must buy or rent from someone who owns a farm before he can start operations. Almost all farming districts have some farms available for sale or rent. However, the competition for these farms from established farmers is very keen. Getting the land to farm is one of the biggest problems of the beginning farmer.

The best sources of information about farms that are for sale or rent are farm real estate dealers, and advertisements in farm newspapers, farm magazines, weekly and daily newspapers. Agricultural representatives of the provincial governments and municipal officials frequently know of farms that are for sale in their districts.

DEVELOPMENT OF NEW FARMLAND

A large area of Canada is unsuitable for agricultural development because of such things as climate, stoniness, rough terrain, swamps and shallow and infertile soils. The proportionately small area suitable for new agricultural development is largely beyond the fringe of present settlement, is Crown-owned, requires clearing and breaking, and sometimes drainage. Experimental tests have shown that it is technically possible to produce vegetables and dairy products in parts of the Yukon and Northwest Territories. However, most vegetable and dairy products can be brought in from other areas as cheaply or more cheaply than they can be produced locally.

Crown-owned land is land owned by the provincial and federal governments. This includes all land that has not been previously settled and some lands that were settled but have reverted to government ownership because they could not support an agricultural enterprise. Crown lands in the provinces are under the jurisdiction of the provincial governments and those in the Yukon and Northwest Territories are under that of the federal government. Regulations respecting the sale of Crown lands differ from province to province. (Free lands are no longer available from any level of government.) In some provinces a prospective settler must have farming experience and fulfill a residence requirement before Crown lands may be purchased.

Some provinces have lands close to the fringe of present settlement which they lease to nearby settlers for growing hay, grazing or cultivation. For example, cattle ranchers in British Columbia and Alberta have large acreages of Crown land under lease. The demand for such land usually exceeds the acreage available.

Few opportunities exist and many problems are involved in starting farming outside the present agricultural area in Canada. Years of hard work and a capital investment as large as that required for a developed farm in a settled area are necessary. A prospective settler should make himself thoroughly familiar with the advantages and disadvantages of the area in which he is interested in farming before he makes a purchase.

TYPE OF FARM AND LOCATION

Although regional specialization in Canadian agriculture is on a very broad base, the type of farm chosen will to some extent determine where farm operations must be located. Conversely, where a farmer wishes to locate limits, to some extent, the type of farm he can operate successfully.

Spring wheat production is largely confined to the Prairie Provinces of Alberta, Saskatchewan and Manitoba, but large acreages of other crops are also grown in these provinces. In the semiarid plains area of southern Saskatchewan and Alberta, wheat production is the only enterprise on many farms, but beef production is also found. North of the plains area in the Prairie Provinces, in what is commonly called the Park Belt Area, moisture efficiency is somewhat better and a more mixed type of farm operation predominates. A large acreage of wheat is grown but so too are oats, barley and flax, Many of the farms have cattle.

Cattle production, in contrast to wheat, is carried on in all provinces. Large ranches located in the southern parts of Saskatchewan and Alberta and the interior of British Columbia specialize in producing beef cattle. However, the largest proportion of Canadian cattle is produced on the smaller mixed type of farms found in all parts of the country.

The regions outside the Prairie Provinces generally have a larger proportion of farmland in forage than in other crops. Small areas have climate and soil suited to the production of such crops as fruit in southern Ontario, Quebec, Nova Scotia and British Columbia; grain corn and tobacco in Ontario and Quebec; and sugar beets in Quebec and Manitoba.

Although some land is irrigated in all provinces, only in Alberta, British Columbia, Saskatchewan and Ontario is the acreage appreciable. In southern Alberta, sugar beets, canning crops, potatoes and forage crops are produced on about 550,000 acres of irrigated land. In British Columbia, where more than 175,000 acres are irrigated, irrigation has turned some of the mountain valleys of the interior into rich fruit-growing areas. Saskatchewan has about 50,000 acres of land irrigated for the production of forage crops. In southern Ontario, irrigation is used to supplement rainfall on 80,000 acres of fruit and vegetable land.

SOURCES OF INFORMATION ON FARMING

Probably the best source of information about agriculture in any given district is the local representative of the agricultural extension service of that province. He has a general knowledge about farms in his district, and can supply information on such things as crops suitable for the area, recommended farming practices, and the size of farm necessary for an economic unit. The addresses of agricultural representatives are available from the agricultural extension service in each province. All the services have their head offices in the provincial capital cities with the exception of Nova Scotia where it is in Truro.

General information on farming, as well as the names and addresses of government departments, private agencies or individuals who can be of assistance to beginning farmers, is available from the Information Division, Canada Department of Agriculture, Ottawa, Ontario.

Persons in foreign countries who are interested in settling on a farm in Canada should contact their nearest Canadian immigration office, and where there is no immigration office, the nearest Canadian Ambassador or Consul. Where there is no Canadian representation, enquiries may be directed to the Canada Immigration Division, Department of Manpower and Immigration, Ottawa, Canada.

ADVISORY AND EDUCATIONAL SERVICES

The Department of Agriculture of the federal government carries on research into the physical and economic problems of agriculture. Experimental farms and research laboratories are located in various parts of the country. The results of this work are made available to farmers by means of bulletins, posters, articles in newspapers and farm magazines, and radio and television programs. Information on markets and prices for agricultural products is distributed in daily and weekly reports on radio and television, in farm magazines, and in some daily and weekly newspapers. Short and long range outlook reports are issued to help in planning production and marketing operations.

Each province has an agricultural extension service with a representative located in each county or district. These representatives interpret research data for farmers, provide assistance and advice in resolving problems, distribute extension bulletins, and give short

courses on various aspects of farm management and other subjects. In addition, the extension services usually have a staff of consultants in specialized fields who may be asked for advice. Some of the extension services have home economists on staff who provide extension education services for farm women.

Many agricultural marketing and supply firms have staff to advise farmers. For example, feed companies give advice on rations for livestock and poultry; building supply firms on building construction; chemical companies on the use of pesticides and herbicides; fertilizer companies on fertilizers and cultural practices; grain marketing companies on grain varieties and markets.

Most provinces have schools that teach vocational agriculture. Some high schools offer courses in agricultural science for students who plan to make farming their career. Degree-granting colleges of agriculture are located in the provinces of Quebec, Ontario, Manitoba, Saskatchewan, Alberta and British Columbia. Graduates of these institutions usually go into research, teaching, administration and advisory work, but some do go farming. Students in Newfoundland, Prince Edward Island, Nova Scotia and New Brunswick may take primary courses at a local college and finish their undergraduate courses in agriculture in one of the other provinces. In addition to the regular comprehensive courses, the colleges and vocational schools also have special short courses designed for farmers.

CREDIT FACILITIES FOR FARM PURCHASE

Several government agencies lend money to farmers to finance the purchase of farmlands in Canada. The Farm Credit Corporation of the federal government is the main source of this type of credit but some provinces have agencies for lending provincial government funds for the purchase of farms. To be eligible for a loan a borrower must be a bona fide farmer, and under provincial government schemes a borrower must be a resident of the province. An objective of all government farm credit agencies is to help a farmer establish his farm as a sound economic farm unit. The maximum loan allowed to a farmer is set by legislation and varies from province to province. Legislation of the federal government and some provincial governments provides for more credit and easier collateral to young farmers, but the farm operations are subject to supervision by the lending agency until the loan is reduced to a certain level.

Under authority provided by the Veterans' Land Act the federal government may lend money to veterans of the Canadian Armed forces, who meet certain requirements of service and farming experience, to help them become established as farmers. Loans may be made to purchase land, buildings, livestock and farm equipment; and to make permanent improvements to a farm.

The Industrial Development Bank, a subsidiary of the Bank of Canada, provides term financing, usually in the form of mortgage loans, to new and existing agricultural enterprises that require assistance for sound projects but are unable to obtain the required financing elsewhere on reasonable terms and conditions.

Private individuals are also a source of considerable credit for financing land purchases. The former owner of a farm sometimes accepts a mortgage in lieu of a cash settlement.

Insurance, mortgage and trust companies sometimes make loans on the better farms on the better lands.

CREDIT FACILITIES FOR OTHER PURPOSES

Farmers obtain short- and intermediate-term credit for production, farm improvement and development from several sources. Some of the most commonly used sources are:

The federal government – A syndicate of three or more farmers may borrow money from the Farm Credit Corporation for joint purchase of farm machinery. Loans are secured by a promissory note signed by all members of the syndicate.

Farm owners whose main income is derived from farming may obtain a loan for construction of a new house, or the remodeling of an existing house, under the terms of the National Housing Act. The Central Mortgage and Housing Corporation, which administers the Act, insures loans made by approved lenders – life insurance companies, trust and loan companies and banks – and may make loans when insured loans are not available from approved lenders.

Provincial governments – Most provincial governments provide credit to individual farmers for purchases of farm machinery, livestock, land clearing and drainage.

Commercial banks– Loans may be obtained from the commercial banks for operating capital and other transactions requiring short-term credit. In addition, an intermediate- and short-term type of credit is available under the Farm Improvement Loans Act of the federal government. Under a government guarantee for repayment, the banks make loans to buy land, farm machinery and livestock, and to improve or develop a farm.

Credit unions– Members of a credit union usually may obtain short- and intermediate-term credit for almost any purpose. Terms under which loans are available depend on the policies of the particular credit union.

Merchants, dealers and finance companies – Credit may be obtained directly or indirectly from dealers wishing to sell their products, and also through loan companies set up specifically to make money loans. This form of credit is usually easier to obtain than others, especially for borrowers with low equity, but interest rates are usually higher than those of other credit sources.

Processing and supply firms – Processing and supply firms may extend credit as part of what is termed "contract farming." There are various types of contracts, ranging from simple credit deals to profit-sharing arrangements. Company supervision of farm operations is sometimes involved.

CAPITAL INVESTMENT AND INCOME

The amount of capital needed to start farming on a full-time basis depends on the type of farm, the productivity of the soil, the proximity of the farm to markets, and whether the farmer buys or rents. A farmer specializing in the production of hogs or poultry requires a small acreage of land compared with a wheat farmer but has a large investment in

buildings and livestock. A cattle rancher, in common with the wheat producer, needs a large acreage of land but ranchland usually costs much less per acre than cropland. Lands near large urban centers usually cost more than lands farther away.

The capital requirements of a beginning farm operator can be lessened if he rents land and equipment. However, competition from established operators greatly reduces the opportunities for him to obtain enough land for an efficient operation by renting. Purchasing used machinery, and hiring, borrowing or exchanging large machines are other means of reducing the initial investment; but starting with less machinery and equipment than is necessary for an efficient operation makes it difficult for a beginning farmer to compete with his established neighbors.

Volume of business is one of the chief things to consider when starting to farm. Reducing capital requirements by obtaining a smaller acreage of land or fewer livestock than is necessary for an efficient farm unit results in a small business. Unfortunately, the operator of a small farm usually finds it difficult to increase the size of his operations.

The rest of this publication describes some types of farms found in Canada, tells where they are, and gives some indication of operating costs and incomes. The data have been taken from farm business studies done by various agencies. Where figures are given they are group averages and are not intended to represent an optimum size of farm business. They are intended only to show the investments, incomes and expenses on some established family-operated farms. Because the information has been taken from different sources it has not been possible to make the data in the different sections comparable in all respects. In addition to the farm income shown, a farm family has the use of a farmhouse and any home-grown produce used on the farm. The value of such perquisites varies with the type of farm and the size of family.

Grain Farms in the Prairie Provinces

Almost all the farms that produce grain – wheat, oats and barley – as the main farm enterprise are located in the Prairie Provinces of Manitoba, Saskatchewan and Alberta. These provinces have a relatively low average annual rainfall and a top soil that in most areas is only a few inches deep. These phenomena have prompted the development of moisture-conserving tillage practices and varieties of grain that are more drought resistant. In spite of improved technology, incomes on grain farms can vary sharply from year to year as growing and harvesting conditions change.

The Prairie Provinces comprise two broad regions, the Prairie region and the Parkland region. The Prairie region is largely in the southern half of Saskatchewan and the southeast part of Alberta. Here, severe droughts are frequent and there are wide variations in crop yields. The soils are relatively low in organic matter and are a distinctive brown or dark brown. The Brown Soil Zone occupies a large area in southwest Saskatchewan and a smaller area in southeast Alberta. It has a semiarid climate and prairie or shortgrass vegetation. The more-productive soils are used for growing crops, mostly wheat, and the less-productive ones are used for cattle grazing. The Dark Brown Soil Zone lies generally to the north of the Brown Soil Zone and extends from the southwest corner of Manitoba across central Saskatchewan to the central part of southern Alberta. Although the climate is less arid than in the Brown Soil Zone, there is a wide variation in crop yields. Wheat is the main crop grown. Long-time average yields are only slightly higher than on the brown soils.

The Parkland region extends from southeast Manitoba, across the north half of Saskatchewan to southwest Alberta. It has a generally undulating topography, numerous undrained depressions, bluffs and groves of aspen and poplar and grey-black to black soils. The soils reflect the better moisture conditions and more abundant vegetation than in the Prairie region. Although the farmers in the Parkland region obtain the largest part of their incomes from crop sales, it is generally classified as a mixed grain-livestock area.

Spring wheat is the main crop grown in almost all of the grain growing areas of the Prairie Provinces. In the Prairie region it is the only crop grown on many farms. In the Parkland region, where moisture conditions are better, other crops are in stronger competition with wheat. Barley is grown for malting and for livestock feed. Oats is grown mainly for livestock feed. Flaxseed and rapeseed are good cash crops in some areas. Durum wheat acreages fluctuate from year to year depending on the availability of markets and the price level. Specialty crops such as mustard, sunflowers and soybeans have been introduced and are successful in some areas. However, the total acreage of these crops is relatively small and only a small proportion of the farmers in the Prairie Provinces receive income from them.

Prairie grain farms require a large acreage of land and a large investment in machinery and equipment. Because of the relatively low average annual rainfall, crop yields and net returns per acre are low. A large acreage of cropland is necessary if a farmer is to receive a good livelihood. The machinery on a typical large grain farm includes two or more tractors, one or more combines, tillage machinery, spraying equipment, swather, grain loader, car and truck.

The operating statements for grain farms shown in the following sections have been calculated from data obtained in farm business studies. Estimates were made on the basis of full ownership of the farm unit by the operator. The data on capital investment and farm expenses have been adjusted to 1967 price levels; prices for grains, livestock and livestock products are averages for the period 1962-67, and grain yields are averages for the period 1948-67. These average yields and prices reflect expenses and incomes better than data for a single year would.

Grain farms with 480 to 640 acres of improved land and those with 800 to 1,400 acres improved are common size groups. Smaller farms still exist, particularly in the northern part of the Parkland region, but they are decreasing in number. Extra-large farms, those with 1,800 acres or more of improved land, are not a typical group at present but their number is increasing and they may soon be a typical size group.

Medium-Productivity Soils in the Brown and Dark Brown Soil Zones – In the areas chosen for a farm business study on loam soils of medium productivity in the Brown and Dark Brown Soil Zones, the average size of all farms was about 1,000 acres. A sample of these farms showed that a typical, medium-sized grain farm had a total capital investment of about $70,000, a large farm about $120,000 and an extra-large farm about $230,000. Operating statements for these three sizes of grain farms are given in Table 1. Average grain yields per acre between 1948 and 1967 were wheat 15.5 bushels, oats 32 bushels and barley 23 bushels.

High-Productivity Soils in the Brown and Dark Brown Soil Zones – Operating statements for three sizes of grain farms on clay soils in the Brown and Dark Brown Soil Zones are given in Table 2. The average size of all the farms in the areas chosen for a farm

Table 1.– Operating Statements for Medium-Sized, Large and Extra Large Grain-Farms on Medium-Productivity Soils in the Brown and Dark Brown Soil Zones of the Prairie Provinces

	Medium-sized farms	Large farms	Extra-large farms
Number of farms in sample	20	20	5
		– acres –	
Total farm area	627	1,112	2,288
Area in grain crops	363	579	1,210
Area in tame hay and pasture	1	2	4
Area in summerfallow	234	488	986
		– dollars –	
Farm capital: Land and buildings	54,618	95,998	196,680
Machinery and equipment	14,787	24,055	33,690
Livestock	177	365	500
Total capital	69,582	120,418	230,870
Farm receipts: Crops	8,491	13,575	25,740
Livestock and livestock products	235	123	265
Other	168	507	550
Total cash receipts	8,894	14,205	26,555
Farm produce used in home	105	30	140
Total receipts	8,999	14,235	26,695
Farm expenses:			
Expenses (less hired labor)	2,691	3,870	6,951
Hired labor	69	218	742
Total cash expenses	2,760	4,088	7,693
Depreciation	2,403	3,340	4,897
Total expenses	5,163	7,428	12,590
Return to operator and family for labor and capital	3,836	6,807	14,105

Source: Changes in Farm Organization, Dark Brown Soil Zone, Saskatchewan, 1964, Pub. 65/13. Economics Branch, Canada Department of Agriculture, Regina, Saskatchewan. Data on farm capital and farm expenses are adjusted to the 1967 price level. Receipts from grain crops are based on 1948-67 average yields and average 1962-67 on-the-farm prices.

Table 2.– Operating Statements for Medium-Sized, Large and Extra-Large Grain Farms on High-Productivity Soils in the Brown and Dark Brown Soil Zones of the Prairie Provinces

	Medium-sized farms	Large farms	Extra-large farms
Number of farms in sample	20	20	5
		– acres –	
Total farm area	634	1,158	2,384
Area in grain crops	374	696	1,255
Area in tame hay and pasture	–	–	–
Area in summerfallow	246	453	1,034
		– dollars –	
Farm capital: Land and buildings	82,024	150,568	296,855
Machinery and equipment	13,220	25,055	32,276
Livestock	141	95	615
Total capital	95,385	175,718	329,746
Farm receipts: Crops	11,957	22,624	41,926
Livestock and livestock products	5	33	164
Other	632	972	1,032
Total cash receipts	12,594	23,629	43,122
Farm produce used in home	81	45	141
Total receipts	12,675	23,674	43,263
Farm expenses:			
Expenses (less hired labor)	3,822	6,034	11,184
Hired labor	342	609	2,081
Total cash expenses	4,164	6,643	13,265
Depreciation	2,276	3,805	5,196
Total expenses	6,440	10,448	18,461
Return to operator and family for labor and capital	6,235	13,226	24,802

Source: Changes in Farm Organization, Dark Brown Soil Zone, Saskatchewan, 1965, Pub. 66/18. Economics Branch, Canada Department of Agriculture, Regina, Saskatchewan. Data on farm capital and expenses are adjusted to the 1967 price level. Receipts from grain crops are based on 1948-67 average yields and average 1962-67 on-the-farm prices.

business study was about 1,000 acres. The typical medium-sized grain farm in the sample studied had an average total capital investment of more than $95,000. Large farms had an average total capital investment of about $175,000 and extra-large farms had $330,000. The higher capital investment of these farms than of farms on the medium-productivity soils was due to higher land values. Average grain yields per acre on these clay soils for the 1948-67 period were wheat 21 bushels, oats 40 bushels and barley 35.5 bushels.

High-Productivity Soils in the Black Soil Zone – Crops grown in the Parkland region are more diversified than in the Prairie region. Although wheat is the main crop grown, it comprises a smaller proportion of the total acres in grain than on the prairies. Other crops grown are oats, barley, flaxseed, rapeseed, legumes and grasses. A larger proportion of the cultivated area is in crop because more of the stubble land is seeded and less land is summerfallowed each year than on the prairies.

Operating statements for some medium-sized grain farms on high productivity soils in the Black Soil Zone are given in Table 3. The average size of all farms in the areas chosen for a farm business study was about 600 acres. The total capital investment per farm averaged about $96,000. Average grain yields per acre on these clay to clay-loam soils for the years 1948 to 1967 were wheat 24.5 bushels, oats 41.5 bushels and barley 30.5 bushels. Grain yields are relatively stable compared with those in the Prairie region. The higher productivity of this region than of the Prairie region is reflected in the smaller average farm size and the higher real estate value per acre. The real estate value averaged $150 per acre of cropland, compared with $85 and $125 for the medium- and high-productivity soils on the brown and dark-brown soils of the Prairie region.

Table 3.– Operating Statements for Medium-Sized Grain Farms on High-Productivity Soils in the Black Soil Zone of the Prairie Provinces

	Medium-sized farms
Number of farms in sample	11
	– acres –
Total farm area	598
Area in grain crops	377
Area in tame hay and pasture	25
Area in summerfallow	123
	– dollars –
Farm capital: Land and buildings	82,997
Machinery and equipment	12,387
Livestock	302
Total capital	95,686
Farm receipts: Crops	12,829
Livestock and livestock products	190
Other	119
Total cash receipts	13,138
Farm produce used in home	11
Total receipts	13,149
Farm expenses:	
Expenses (less hired labor)	3,965
Hired labor	384
Total cash expenses	4,349
Depreciation	2,536
Total expenses	6,885
Return to operator and family for labor and capital	6,264

Source: Changes in Farm Organization, Black Soil Zone, Manitoba, 1964, Pub. 65/5. Economics Branch, Canada Department of Agriculture, Regina, Saskatchewan. Data on farm capital and expenses are adjusted to the 1967 price level. Receipts from grain crops are based on 1948-67 average yields and average 1962-67 on-the-farm prices.

Grain-Cattle Farms in the Prairie Provinces

Although considered primarily a grain-growing region, the Prairie Provinces contain a substantial area of land that is unsuitable for grain production but is suitable for cattle grazing or native hay production. Tracts of this land vary in size from a few acres to thousands of acres. The large tracts are usually occupied by cattle ranches and publicly or co-operatively owned community pastures. Many farmers throughout the grain growing area have lands that are too rolling, stoney, wet or otherwise unsuitable for grain production and they keep a herd of cattle to utilize this nonarable land. The rougher lands are likely to be used for pasture and the meadow-type lands supply hay for winter feed. The cattle herd may consist of a few head to supplement income from crop production or it may be an enterprise that is the largest source of income on the farm.

Many farmers believe that livestock add a degree of stability to farm income although in years of drought pasture and hay crops, and water for stock watering, may be in short supply. Better use of the farm labor resources is possible on a grain-cattle farm than on a grain farm because the labor requirement for cattle is low during the grain-growing season and relatively high in the winter. Some farmers with cattle but little or no pastureland use community pastures for summer grazing and native or tame hays, late-seeded coarse grains and straw for winter feed.

Grain-cattle farmers usually seed a larger proportion of their cropland to coarse grains than do grain farmers. Some seed small acreages of tame hay and pasture. These may be seeded in a crop rotation by which the grass is seeded at regular intervals on the whole farm, but usually they are seeded on lands that have a relatively low capacity to produce grains and are left seeded down until reseeding is necessary. In many parts of the Prairie region a shortage of moisture frequently hinders the establishment of a forage crop.

There is considerable difference between the carrying capacity of grazing lands in the Prairie region and that of grazing lands in the Parkland region of the Prairie Provinces. The lowest carrying capacity is in the semiarid shortgrass prairie area of southwest Saskatchewan and southeast Alberta, that is, in the Brown Soil Zone. The mixed short and medium-tall grasses of the Dark Brown Soil Zone have a slightly higher carrying capacity. Because of better moisture conditions, pastures in the Parkland region have a higher carrying capacity than those in the Prairie region. Also, since the Parkland region has a higher proportion of nonarable land, grain-cattle farms are more common there than on the prairies.

Many grain-cattle farms are primarily grain farms with some cattle to utilize nonarable land and to supplement income from grain crops. Usually, these farmers already had buildings adequate for a beef cattle enterprise and, when they added cattle to the farm business, did not have to make a large capital expenditure for buildings. The real estate investment on grain-cattle farms usually is similar to that on grain farms in the same area. Grain-cattle farmers require the same complement of machinery as grain farmers, plus some haying equipment.

The budget summaries in the tables following are intended to reflect the average capital investment, income and expenses on some owner-operated grain-cattle farms. Data on capital investment and farm expenses have been adjusted to 1967 price levels; estimates of receipts from crops and livestock were made using average prices for the period 1962-67, and grain yields were averages for the period 1948-67.

Medium-Productivity Soils in the Brown and Dark Brown Soil Zones – Operating statements for some grain-cattle farms on loam soils in the Brown and Dark Brown Soil Zones are given in Table 4. Wheat was the main crop grown but some coarse grains were grown for livestock feed. Average yields per acre during the 1948-67 period were wheat 15.5 bushels, oats 32 bushels and barley 23 bushels.

Although smaller and larger farms are found in the study areas, the sizes studied are the most common. The sizes of the cattle herds on these farms varied but all had 10 or more beef cows. The average total capital investment was about $73,000 for the medium-sized farms and $129,000 for the large farms.

Table 4.– Operating Statements for Medium-Sized and Large Grain-Cattle Farms on Medium-Productivity Soils in the Brown and Dark Brown Soil Zones of the Prairie Provinces

	Medium-sized farms	Large farms
Number of farms in sample	20	18
	– acres –	
Total farm area	693	1,199
Area in grain crops	300	581
Area in tame hay and pasture	29	33
Area in summerfallow	252	435
	– dollars –	
Farm capital: Land and buildings	53,453	95,736
Machinery and equipment	12,455	24,602
Livestock	6,816	8,736
Total capital	72,724	129,074
Farm receipts: Crops	4,836	12,218
Livestock and livestock products	3,361	3,512
Other	534	761
Total cash receipts	8,731	16,491
Farm produce used in home	480	410
Total receipts	9,211	16,901
Farm expenses:		
Expenses (less hired labor)	3,339	4,879
Hired labor	86	359
Total cash expenses	3,425	5,238
Depreciation	2,300	3,641
Total expenses	5,725	8,879
Return to operator and family for labor and capital	3,486	8,022

Source: Changes in Farm Organization, Dark Brown Soil Zone, Saskatchewan, 1964, Pub. 65/13. Economics Branch, Canada Department of Agriculture, Regina, Saskatchewan. Data on farm capital and farm expenses are adjusted to the 1967 price level. Receipts from grain crops are based on 1948-67 average yields and average 1962-67 on-the-farm prices. Receipts from livestock are 1962-67 average prices.

Medium-Productivity Soils in the Black Soil Zone – Operating statements for some grain-cattle farms on medium productivity black soils in the Parkland region are given in Table 5. The proportion of unimproved land on these farms is greater than on farms in the Prairie region. For the study area as a whole, average grain yields per acre during the period 1948-67 were wheat 20 bushels, oats 32 bushels and barley 24.5 bushels. Smaller farms than those studied still exist in this area but the trend is to larger farms. The average total capital investment was about $50,000 for a medium-sized grain-cattle farm and about $100,000 for a large farm.

Table 5.– Operating Statements for Medium-Sized and Large Grain-Cattle Farms on Medium-Productivity Soils in the Black Soil Zone of the Prairie Provinces

	Medium-sized farms	Large farms
Number of farms in sample	19	18
	– acres –	
Total farm area	682	1,100
Area in grain crops	285	451
Area in tame hay and pasture	53	106
Area in summerfallow	141	174
	– dollars –	
Farm capital: Land and buildings	39,308	64,306
Machinery and equipment	8,152	21,395
Livestock	5,289	10,934
Total capital	52,749	96,635
Farm receipts: Crops	4,837	10,838
Livestock and livestock products	1,822	5,261
Other	124	20
Total cash receipts	6,783	16,119
Farm produce used in home	213	179
Total receipts	6,996	16,298
Farm expenses:		
Expenses (less hired labor)	2,622	5,226
Hired labor	39	779
Total cash expenses	2,661	6,005
Depreciation	1,477	2,990
Total expenses	4,138	8,995
Return to operator and family for labor and capital	2,858	7,303

Source: Changes in Farm Organization, Black Soil Zone, Manitoba, 1965, Pub. 66/7. Economics Branch, Canada Department of Agriculture, Regina, Saskatchewan. Data on farm capital and farm expenses are adjusted to the 1967 price level. Receipts from grain crops are based on 1948-67 average yields and average 1962-67 on-the-farm prices. Receipts from livestock are 1962-67 average prices.

Beef Cattle Farms

Beef is produced in almost all parts of the agricultural area of Canada. In Eastern Canada, where many of the soils are best suited to the production of grass and hay crops, beef cattle farms are relatively small in area and the beef enterprise is often carried on in conjunction with some other farm enterprise. In the Prairie Provinces, beef cattle are usually raised on land that has a relatively low value per acre because it is not well suited to grain production. Many prairie farmers raise beef cattle and also have a grain-growing enterprise. There are large-scale cattle ranches in southwestern Saskatchewan, southeastern Alberta, and the foothills area of the Rocky Mountains in western Alberta. Cattle ranches are also located on the semiarid interior plateaus of British Columbia.

The methods of raising and marketing cattle vary from farm to farm and area to area. Some farmers fatten the cattle they raise and sell directly for slaughter; however, some of the operators of small farms, and almost all ranchers, raise cattle to sell for fattening elsewhere. On specialized cattle-feeding farms, little land may be used. Cattle, grain and forage may all be purchased. Fattening of cattle is sometimes done in feedlots near large urban centers; sometimes close to a large plant such as distillery or a beet sugar refinery, where the by-products from the processing of agricultural products are used for cattle feed; and sometimes close to a large market, so that the farmer can keep in constant touch with market conditions. Feeding for fattening is common in southern Ontario, the irrigated areas of Alberta, and the Fraser Valley near Vancouver in British Columbia.

Beef cattle require less elaborate housing than dairy cattle. Large stanchion-type barns are too expensive to maintain and require too much labor for housing a beef herd. In almost all parts of Canada a shed-type shelter that provides protection from extremely cold weather and heavy snow storms is adequate for all but early calves and sick animals. Where old-style barns exist, as they do on many farms in Canada, they often can be modified to provide some of the needed shelter. A beef herd requires year-round labor and management but, on a well-managed establishment, they need much less attention than a dairy herd of similar size.

Although there is a strong demand for ranching property, the turnover of ranchland through sale is much slower than for most other types of farms. Cattle ranches usually consist of large acreages of both owned and leased land. Usually, hay meadow and cropland are owned, and some of the grazing land is leased. Sometimes leasing rights to certain lands are capitalized into the value of the owned land. Because of the demand for land in ranching areas it is difficult to expand a ranch holding. The purchase of ranchland often necessitates the purchase of a complete ranch.

Cattle Ranching in the Prairie Provinces

In the Prairie Provinces, large-scale beef production in the form of cattle ranching takes place mainly in the foothills of the Rocky Mountains in Alberta and in the shortgrass Prairie region of southeast Alberta and southwest Saskatchewan. Large areas of open grassland are characteristic of these regions; little of the land is suitable for arable culture.

Cattle ranchers here engage in one of three types of production: marketing the entire cattle output as feeder calves at six or seven months of age, marketing the entire output as feeder yearlings at 18 months of age, or marketing both feeder calves and feeder

yearlings. Operators of small ranches tend to sell feeder calves, and those of large ranches to sell feeder yearlings. Most of the female replacement stock is home-raised with the rest bought from breeders and local auction markets. Winter feeding is in conjunction with some winter grazing and usually lasts four to five months. Winter shelter usually consists of relatively cheap barns and sheds.

The Shortgrass Region – The shortgrass region lies within the Brown Soil Zone of the Prairie Provinces. It has shortgrass vegetation, no trees, and a semiarid climate. Annual precipitation usually is between 11 and 13 inches. Summers are relatively hot and the rate of evaporation is high. Water is a limiting factor in the use of the range. Dams, wells and

Table 6.– Operating Statements for Small and Large Cattle Ranches in the Shortgrass Region of Alberta

	Small Ranches	Large Ranches
Number of ranches in study	26	26
Number of breeding cows	46	81
Number of animal units	55	101
Number of animal units per man equivalent	41	71
	– acres –	
Average size of ranch	2,520	4,490
Land use:		
Improved land: Area in grains	310	330
Area in forage and roughage	60	140
Area in summerfallow	265	270
Unimproved land: Area in grazing	1,840	3,640
Area in wild hay	10	40
Area in waste	35	70
	– dollars –	
Ranch capital: Land and buildings	41,500	43,100
Machinery	9,500	11,300
Livestock	10,800	19,000
Equipment, supplies and miscellaneous	2,600	2,600
Total capital	64,400	76,000
Ranch receipts: Crops	4,700	4,670
Livestock and livestock products	4,510	8,160
Other	660	550
Total cash receipts	9,870	13,380
Produce used in home	180	230
Total receipts	10,050	13,610
Ranch expenses:		
Expenses (less hired labor)	4,360	5,640
Hired labor	120	500
Total cash expenses	4,480	6,140
Depreciation	2,110	2,670
Total expenses	6,590	8,810
Return to operator and family for labor and capital	3,460	4,800

Source: Knud Elgaard, Cattle Ranching in Southern Alberta, 1965, Pub. 68/3. Economics Branch, Canada Department of Agriculture, Regina, Saskatchewan.

dugouts must be relied upon for a large part of the water supply. Much of the land is unsuitable for arable culture. The carrying capacity of the range is rated at 50 acres per animal unit per year.

Operating statements for some typical ranches in this region are given in Table 6. The average size of all the ranches in the study from which these data were taken was about 3,500 acres. The smaller ranches had an average total capital investment of about $60,000 and the larger ranches about $75,000. Wheat was a significant secondary enterprise on some ranches and was the reason for the higher investment in machinery there than on ranches in the foothills region.

The Foothills Region: The foothills region consists of rolling hills on the fringe of the eastern side of the Rocky Mountains. The main vegetative cover is tall grasses, with some brush and light bush in valleys and on northern slopes. Some valleys and benchlands have soils suitable for cultivation. Annual precipitation ranges from 15 to 20 inches. The water supply is ample and of good quality for livestock. The carrying capacity of the range is rated at 50 acres per animal unit per year.

Operating statements for some typical ranches in this region are given in Table 7. The average size of the cattle ranches in the study from which these data were taken was 2,500 acres. The smaller ranches had a total capital investment of about $85,000 and the larger ranches about $211,000. Land values in the foothills region were three to four times higher than in the shortgrass region, and were the main reason for the larger capital investments in real estate.

Cattle Ranches in British Columbia

The cattle-ranching area of British Columbia is located in what has been termed a broad plateau in the south-central part of the Province. The area is broken by frequent valleys and mountain ranges. Differences in elevation cause great variation in rainfall. Typically, the valleys are dry and warm, and the higher levels have more precipitation and lower average temperatures.

A study of ranching in this area has shown that the general pattern of land tenure is to have some owned and some leased lands. The owned lands are usually located in a valley bottom with an acreage suitable for cultivation and access to water for irrigation. The farmstead and wintering grounds for the cattle are located here. The cultivated land is used to produce winter feed. The leased acreage usually is adjacent or reasonably close to the owned land, and often has been a part of the total ranch area for many years. The leased land is used for spring and fall grazing. Summer grazing, from June 1 or 15 to October 1 or 15, is on land termed "Crown Range." This land is on the mountain slopes where vegetative growth suitable for pasture occurs in the forest zone. Grazing permits for the range are controlled by the British Columbia Forest Services. A permit specifies the number of cattle that may be grazed. The annual grazing fee is adjusted as beef prices change.

The average size of the ranches in this study was about 2,200 acres, including owned, rented and leased land (Table 8). Improved crop and hay land averaged about 219 acres per ranch. The average herd was 210 animal units in size and had 151 breeding cows and heifers. Generally, one man cared for and did the work associated with production of feed for 104 animal units during the year.

Table 7.– Operating Statements for Small and Large Cattle Ranches in the Foothills Region of Alberta

	Small Ranches	Large Ranches
Number of ranches in study	25	25
Number of breeding cows	52	136
Number of animal units	71	208
Number of animal units per man equivalent	56	101
	– acres –	
Average size of ranch	1,140	4,000
Land use:		
Improved land: Area in grains	80	90
Area in forage and roughage	160	360
Area in summerfallow	35	40
Unimproved land: Area in grazing	780	3,270
Area in wild hay	10	50
Area in waste	75	190
	– dollars –	
Ranch capital: Land and buildings	60,000	149,800
Machinery	7,900	11,700
Livestock	16,000	47,200
Equipment, supplies and miscellaneous	900	2,100
Total capital	84,800	210,800
Ranch receipts: Crops	3,130	5,540
Livestock and livestock products	6,640	18,080
Other	310	230
Total cash receipts	10,080	23,850
Produce used in home	260	310
Total receipts	10,340	24,160
Ranch expenses:		
Expenses (less hired labor)	3,680	7,810
Hired labor	140	1,540
Total cash expenses	3,820	9,350
Depreciation	1,760	3,160
Total expenses	5,580	12,510
Return to operator and family for labor and capital	4,760	11,650

Source: Knud Elgaard, Cattle Ranching in Southern Alberta, 1965, Pub. 68/3. Economics Branch, Canada Department of Agriculture, Regina, Saskatchewan.

Table 8.— Operating Statements for Cattle Ranches in British Columbia, 1966-1967

Number of ranches in study	102
Number of breeding cows and heifers in herd	151
Number of animal units in herd	210
Number of animal units per man equivalent	104
	acres
Total ranch area	2,188
Land use: Improved crop and hay land	219
Irrigated	142
Nonirrigated	77
Unimproved land, including meadows	1,969
	dollars
Ranch capital:	
Land and buildings	81,208
Livestock	42,887
Equipment, feeds, miscellaneous	17,936
Total	142,031
Ranch receipts:	
Livestock	16,800
Capital	832
Inventory increase	4,572
Other	1,349
Total	23,553
Ranch expenses:	
Livestock	5,040
Hired labor	1,890
Equipment	2,520
Capital	5,204
Other	4,065
Total	18,719
Net ranch income	4,834

Source: Economics Branch, Canada Department of Agriculture, Vancouver, British Columbia.

General Beef Cattle Farms in Ontario

Excluding farms that specialize in feeding cattle in feedlots, beef cattle farms in Ontario are more or less of a general type. A cattle herd often consists of a mixture of beef and dairy breeds and their crosses. On some farms the calves suckle the cows until six or eight months of age; on others, some cows are milked and cream is sold. Cattle-selling practices vary. Usually, the cattle from the general beef farms are sold to farmers who specialize in feeding for slaughter, but some are fed to slaughter weights on the farm where born. Those sold for fattening on other farms may be sold at weaning time or up to a year or more after weaning.

Table 9 gives data on the capital investment, receipts and expenses of some general beef farms in 1966 and 1967. The capital and labor requirements for general beef farms were the lowest of any type of farm in Ontario.

Table 9.– Operating Statements for General Beef-Cow Farms[a] in Ontario

	1966	1967
Number of farms in group	23	15
Number of cows in herd	20	33
Number of man equivalents of labor	1.2	1.3
Number of acres of tillable land	160	183
	– dollars –	
Farm capital:		
Land and buildings	25,100	24,656
Livestock	12,499	13,972
Machinery	7,753	7,922
Crops and supplies	3,257	3,251
Total	48,609	49,801
Farm receipts:		
Beef enterprise	8,091	7,064
Other livestock and crop enterprises	4,315	4,081
Miscellaneous	743	413
Inventory change - livestock	1,329	1,390
- crops and supplies	–129	776
Total	14,349	13,724
Farm expenses:		
Beef enterprise	3,862	3,090
Other livestock and crop enterprises	3,186	3,954
Tractor and machinery	759	818
Truck and automobile	500	510
Interest	365	504
General	1,771	1,388
Hired labor	150	72
Depreciation on buildings and machinery	1,621	1,676
Total	12,214	12,012
Net farm income	2,135	1,712

[a] Farms receiving between 50 and 75 per cent of their gross income from a beef cow herd.

Source: Summary Report Ontario Farm Management and Accounting Project, Pub. 315, Annual. Ontario Department of Agriculture and Food, Toronto, Ontario.

Beef Feeder Farms in Ontario

Beef feeder farmers specialize in purchasing and feeding beef steers and heifers. Some of the cattle fed on these farms are home-raised but most are purchased, sometimes from Western Canada. A large proportion of the grains fed is purchased also. A feature of the business operations of beef feeder farms is the substantial amount of operating capital required during the year for these purchases.

Table 10 gives operating statements for some beef feeder farms. Capital and labor requirements for these farms are comparable with those for other large, specialty-type farms in Ontario.

Table 10.– Operating Statements for Beef Feeder Farms[a] in Ontario

	1966	1967
Number of farms in group	8	6
Number of man equivalents of labor	1.5	1.5
Number of acres of tillable land	218	194
	– dollars –	
Farm capital:		
Land and buildings	31,970	36,112
Livestock	24,084	30,509
Machinery	10,280	9,451
Crops and supplies	5,594	5,883
Total	71,928	81,955
Farm receipts:		
Steer enterprise	29,677	41,758
Other livestock and crop enterprises	1,553	1,482
Miscellaneous	889	811
Inventory change - livestock	3,232	881
- crops and supplies	–541	412
Total	34,810	45,344
Farm expenses:		
Steer enterprise	20,185	28,765
Other livestock and crop enterprises	2,722	2,733
Tractor and machinery	1,078	1,202
Truck and automobile	443	600
Interest	865	1,008
General	2,061	2,287
Hired labor	868	250
Depreciation on buildings and machinery	2,402	2,352
Total	30,624	39,197
Net farm income	4,186	6,147

[a] Farms receiving more than 75 per cent of their gross income from a steer herd.

Source: Summary Report Ontario Farm Management and Accounting Project, Pub. 315, Annual, Ontario Department of Agriculture and Food, Toronto, Ontario.

Dairy Farms

Dairy products are produced in all agricultural areas of Canada. Although modern transportation and refrigeration methods allow a wide distribution of the farms that produce milk for a fluid market, usually these farms are located within easy transportation distance of large centers of population. Farmers in more-outlying districts usually produce milk for condensing, butter and cheese making.

The dairy industry is undergoing substantial structural changes. Dairy farms are becoming larger and fewer in number. Farms producing milk for the fluid market have become highly specialized with the introduction of farm bulk tanks, milking parlors, pipeline milking, and loose-housing. The organization of dairy farms varies with their size, location and type of operation. Typically, the land is used for the production of hay,

pasture and feed grains. Many of the larger dairy farms, however, do not produce enough grain and forages for their own use and purchased feeds are a large item of expense. Large quantities of hay and grain to feed dairy cattle are brought into some districts, such as southern Ontario and southern British Columbia.

Capital requirements on dairy farms are usually greater than on beef cattle farms. Dairy farms require more elaborate housing and equipment and are usually located on higher-priced land. Housing in the Canadian climate must provide adequate protection from cold and draughts, together with proper ventilation and conveniences, for cleaning both barn and equipment.

The production, processing and sale of milk and its products is governed by federal, provincial and municipal legislation. Producers of fluid milk must conform to strict sanitary regulations in the care and maintenance of premises and equipment. Regulations governing the care and maintenance of premises and equipment on farms producing milk for non-fluid sales traditionally have been somewhat less stringent but are gradually being brought to the same standard. Most provinces have boards to establish prices for fluid milk. In addition, these agencies usually exert control over the supply of fluid milk by registering the producers and allotting each of them in a given milkshed a marketing quota, an amount usually sold under a contract for a certain price. Any milk produced in excess of this quota is sold for some other use at a lower price.

The federal government, through the Canadian Dairy Commission, assists producers of manufacturing milk and cream by making subsidy payments for these commodities and by offer-to-purchase programs for certain dairy products. The Commission allocates subsidy eligibility quotas to individual shippers. The objectives of the federal government dairy policy are to rationalize the dairy industry at the farm level and to provide price stability for dairy products in the domestic market.

Dairy Farms in Ontario

Dairy farms are an important segment of the agriculture industry in Ontario. Receipts from sales of dairy products made up 20 per cent of the cash receipts from sales of farm products by Ontario farmers in 1967. In addition, they obtained income from the sale of calves, cull dairy cows and breeding stock. The large urban population of the Province constitutes a ready market for large quantities of dairy products.

Dairy farms in Ontario may be divided into two main types: farms that supply milk for sale to consumers as fluid milk; and farms that ship milk to condenseries, cheese factories and creameries. Within each group there is a wide range in size of cow herd and size of business. In general, fluid-milk farms have larger herds and a more specialized farm business. Tables 11 and 12 give data on the operations of some farms of these two types during 1966 and 1967. The fluid-milk farms used more capital in the form of livestock, machinery, supplies and real estate than the non-fluid-milk farms. The difference in real estate value is greater than the difference in size of farm, indicating that fluid-milk farms had more expensive land and buildings. On a per-farm basis, the fluid-milk farms used more labor, had higher operating expenses, a larger farm business and a higher net farm income.

Table 11.– Operating Statements for Specialized Fluid-Milk Farms[a] in Ontario

	1966	1967
Number of farms in group	93	66
Number of cows in herd	40	41
Number of man equivalents of labor	1.9	2.0
Number of acres of tillable land	185	200
	– dollars –	
Farm capital:		
Land and buildings	36,258	44,715
Livestock	15,612	17,514
Machinery	14,674	17,110
Crops and supplies	4,782	6,044
Total	71,326	85,383
Farms receipts:		
Dairy enterprise	24,215	27,690
Other livestock and crop enterprises	1,402	2,146
Miscellaneous	750	673
Inventory change - livestock	1,503	1,294
- crops and supplies	343	844
Total	28,213	32,647
Farm expenses:		
Dairy enterprise	7,999	8,014
Other livestock and crop enterprises	2,634	3,256
Tractor and machinery	1,666	1,817
Truck and automobile	556	627
Interest	777	1,068
General	2,834	3,214
Hired labor	1,855	2,183
Depreciation on buildings and machinery	3,200	3,848
Total	21,521	24,027
Net farm income	6,692	8,620

[a] Farms receiving more than 75 per cent of their gross income from dairy produce, main dairy product fluid milk.

Source: Summary Report Ontario Farm Management and Accounting Project, Pub. 315, Annual, Ontario Department of Agriculture and Food, Toronto, Ontario.

Table 12.– Operating Statements for Specialized Non-Fluid-Milk Farms[a] in Ontario

	1966	1967
Number of farms in group	65	55
Number of cows in herd	30	28
Number of man equivalents of labor	1.5	1.5
Number of acres of tillable land	164	156
	– dollars –	
Farm capital:		
Land and buildings	25,477	24,211
Livestock	11,517	12,342
Machinery	10,320	9,462
Crops and supplies	3,450	3,296
Total	50,764	49,311
Farm receipts:		
Dairy enterprise	14,262	15,135
Other livestock and crop enterprises	1,529	1,463
Miscellaneous	455	454
Inventory change - livestock	1,384	1,440
- crops and supplies	143	679
Total	17,773	19,171
Farm expenses:		
Dairy enterprise	3,930	4,644
Other livestock and crop enterprises	2,144	2,013
Tractor and machinery	903	1,096
Truck and automobile	463	529
Interest	660	740
General	1,973	1,894
Hired labor	610	412
Depreciation on buildings and machinery	2,110	2,081
Total	12,793	13,409
Net farm income	4,980	5,762

[a] Farms receiving more than 75 per cent of their gross income from dairy produce, main dairy products industrial milk and cream.

Source: Summary Report Ontario Farm Management and Accounting Project, Pub. 315, Annual, Ontario Department of Agriculture and Food, Toronto, Ontario.

Dairy Farms in British Columbia

Dairy farms in British Columbia are concentrated in several areas of the province. In order of importance these milksheds are located in the Fraser Valley, the southern half of Vancouver Island, the north Okanagan Valley and in Central British Columbia. Smaller numbers of dairy farms are located in the east and west Kootenay region and in the Peace River area.

Dairy Farms in the Fraser Valley – Fraser Valley dairy farmers market most of their products in the city of Vancouver and its environs. Processing and distribution are handled by a large co-operative organization and several private firms.

Soils in the Fraser Valley are usually more productive than elsewhere in the Province and, being close to the largest metropolitan area, the land commands a higher price per acre. The competition for non-farm use of land also contributes substantially to high land values in this area.

The improved farmland on these farms is used to produce forage for summer pasture and for winter hay and silage. Nearly all of the grain requirement is purchased from feed mixing plants in the form of prepared dairy rations. The grains are brought in from the Peace River area in northern British Columbia and from the Prairie Provinces. Prepared rations and supplements are a large item of expense on dairy farms.

In 1967, a random selection of 112 fluid-milk farms in the Fraser Valley had an average capital investment of $122,124 per farm (Table 13). Land and buildings made up about 66 per cent of the total. In the Fraser Valley, fluid-milk quotas have a marketable value of about $14 a pound. For the farms in this study, the milk quota had an average value of $10,659. Net farm income on these farms ranged from $1,983 on the lowest income farm to $33,130 on the farm with the highest net income.

Table 13.— Operating Statements for Dairy Farms, Fraser Valley, British Columbia, 1967

Number of farms in group	112
Gross receipts per 100 pounds of milk sold	$5.81
Size of Farm:	
Number of milk cows	35
Number of improved acres	66
Number of unimproved acres	6
Total acreage	72
	— dollars —
Farm capital:	
Land and buildings	81,076
Machinery and equipment	12,247
Livestock	15,631
Other	2,511
Total	111,465
Farm receipts:	
Current	25,414
Capital	913
Inventory increase	7,016
Total	33,343
Farm expenses:	
Current	14,135
Capital	7,554
Total	21,689
Net farm income	11,654

Source: Economics Branch, Canada Department of Agriculture, Vancouver, British Columbia.

Dairy Farms in Nova Scotia

Dairying is a major farm enterprise in the Atlantic region; in Nova Scotia it accounts for about half the total farm cash receipts.

Dairy farms tend to be specialized with much of their output marketed as fluid milk. Improved acreage on these farms is devoted mainly to the production of forage and pasture. A large proportion of the concentrates used in the dairy rations are purchased.

Dairy farms in western Nova Scotia tend to have a larger business than those in the eastern part of the Province (Table 14). They have a larger acreage of improved land, keep more cows and raise a higher percentage of their dairy replacements. A higher percentage of their output is used in processing and prices received for milk are somewhat lower than in the eastern part of the Province.

Table 14.— Operating Statements for Some Dairy Farms in Nova Scotia

	Eastern Nova Scotia	Western Nova Scotia
Number of farms in study	15	20
Price per 100 pounds of milk sold	$6.33	$5.34
Size of farm:		
Number of cows	22	41
Number of improved acres	63	100
Number of unimproved acres	216	120
Total acreage	279	220
	– dollars –	
Farm capital:		
Land and buildings	9,138	21,288
Livestock	4,740	13,125
Equipment	7,438	12,359
Other	1,052	1,559
Total	22,368	48,331
Farm receipts:		
Sales of farm products	10,575	22,008
Miscellaneous	206	526
Inventory change (livestock and supplies)	810	1,866
Total	11,591	24,400
Farm expenses:		
Current operating	6,177	16,462
Depreciation on buildings and machinery	1,374	2,367
Total	7,551	18,829
Net farm income	4,040	5,571

Source: Farm Management and Statstics Division, Extension and Economics Branch, Nova Scotia Department of of Agriculture and Marketing, 1967.

Hog Farms

Hog production is being transformed from what was more or less a part-time or supplementary enterprise to a highly specialized type of farming. The number of farmers keeping one or two sows and raising one or two litters of pigs a year has been declining rapidly.

Capital requirements for hog farms are influenced by the type and size of enterprise and other circumstances peculiar to individual farms. Some farmers have converted barns formerly used for cattle, horses or fodder storage to piggeries, and others have built mechanically equipped housing. The purchase of feed and livestock requires a substantial amount of operating capital throughout the year on farms specializing in hog feeding.

Table 15.– Operating Statements for Specialized Swine Farms[a] in Ontario

	1966	1967
Number of farms in group	25	18
Number of man equivalents of labor	1.3	1.4
Number of acres of tillable land	125	133
	– dollars –	
Farm capital:		
Land and buildings	29,152	34,444
Livestock	12,709	13,917
Machinery	8,781	11,040
Crops and supplies	4,696	6,241
Total	55,338	65,642
Farm receipts:		
Swine enterprise	26,485	29,290
Other livestock and crop enterprises	6,146	7,030
Miscellaneous	393	565
Inventory change - livestock	696	–302
- crops and supplies	–190	691
Total	33,530	37,284
Farm expenses:		
Swine enterprise	14,616	18,086
Other livestock and crop enterprises	5,127	5,692
Tractor and machinery	1,278	1,157
Truck and automobile	577	514
Interest	845	1,169
General	2,456	3,114
Hired labor	530	721
Depreciation on buildings and machinery	1,999	2,677
Total	27,428	33,130
Net farm income	6,102	4,154

[a] Farms receiving more than 75 per cent of their gross income from a swine enterprise.

Source: Summary Report Ontario Farm Management and Accounting Project, Pub. 315, Annual, Ontario Department of Agriculture and Food, Toronto, Ontario.

Hog Farms in Ontario

There are still farms in Ontario where a few sows are kept and pigs are raised from birth to slaughter weight as a secondary enterprise, but this type of farm no longer supplies the majority of slaughter hogs in most areas of the Province. Large-scale, weanling-pig enterprises have developed where a sow herd is maintained and the pig crop is sold as weanlings or feeders. These are fed to slaughter weights on farms specializing in feeding operations, where a heavy reliance may be placed on purchased feed. Table 15 gives operating statements for some hog farms in Ontario during 1966 and 1967.

Hog Feeder Enterprises in Nova Scotia

Few farms actually specialize in swine production but hog feeding is an important part of the business of many farms in the Atlantic Region. In recent years a hog feeding enterprise has replaced poultry production on many mixed farms.

In Nova Scotia a hog feeding enterprise depends largely on purchased feed. The general practice is for the feeder to purchase weanling pigs from other farms. Feed and weanlings are the two major cost items and, as shown in Table 16, account for more than 90 per cent of the cash expenses of some hog feeding enterprises.

Table 16.– Operating Statements for Some Hog Feeder Enterprises in Nova Scotia, 1966 and 1967

Number of enterprises	14
Hogs marketed per enterprise	540
Hours of labor on hogs	638
	– dollars –
Investment:	
Buildings and equipment	2,094
Hogs	5,147
Receipts:	
Sales of market hogs	27,748
Inventory increase in hogs	718
Total	28,466
Expenses:	
Feed	15,385
Weanling pigs	8,541
Other cash expenses	987
Depreciation	237
Total	25,150
Net return to labor and investment	3,316

Source: Economics Branch, Canada Department of Agriculture, Truro, Nova Scotia.

Poultry Farms

Commercial poultry and egg production has become a highly specialized type of operation. The trend has been for the poultry industry to shift from the general farming areas to localized areas of production close to large urban centers. This facilitates rapid movement of the products to the consumer under controlled conditions of sanitation, temperature and humidity. Considerable integration has taken place between the producer and the feed manufacturer, the hatchery, and the retail distributor, particularly in broiler and egg production.

Poultry Farms in Ontario

Operating statements for some farms on which a poultry enterprise was the chief source of income are given in Table 17. Cattle, kept to utilize hay and pasture, were an important secondary enterprise on the general poultry farms. A significant feature of the

Table 17.– Operating Statements for Some Poultry Farms in Ontario

	Specialized[a] 1966	General[b] 1966	General[c] 1967
Number of farms in group	5	6	6
Number of man equivalents of labor	1.6	1.5	1.7
Number of acres of tillable land	150	118	169
		– dollars –	
Farm capital:			
Land and buildings	48,093	26,884	28,752
Livestock	14,538	10,257	11,246
Machinery	19,061	12,858	12,516
Crops and supplies	3,899	3,692	4,346
Total	85,591	53,691	56,860
Farm receipts:			
Poultry enterprise	54,692	14,521	24,580
Other livestock and crop enterprises	10,441	10,811	13,434
Miscellaneous	489	894	264
Inventory change - livestock	4,253	506	–1,506
- crops and supplies	1,380	–193	926
Total	71,255	26,539	37,698
Farm expenses:			
Poultry enterprises	28,730	7,028	16,440
Other livestock and crop enterprises	15,768	10,078	8,189
Tractor and machinery	1,861	1,460	1,565
Truck and automobile	599	534	709
Interest	1,260	494	1,219
General	3,117	1,544	3,253
Hired labor	1,327	764	763
Depreciation on buildings and machinery	4,059	2,736	3,393
Total	56,490	24,638	35,531
Net farm income	14,765	1,901	2,167

[a] Farms receiving more than 75 per cent of their gross income from a poultry enterprise.
[b] Farms receiving between 50 and 75 per cent of their gross income from a poultry enterprise.
[c] Farms receiving more than 50 per cent of their gross income from a poultry enterprise.

Source: Summary Report Ontario Farm Management and Accounting Project, Pub. 315, Annual, Ontario Department of Agriculture and Food, Toronto, Ontario.

organization of the specialized farms was the large capital investment in real estate. These farms also used more hired labor and a substantial amount of operating capital to purchase feed during the year. Feed was the largest single cost item. In 1966, net farm income on specialized poultry farms was larger than on any other type for which operating statements were available.

Fruit Farms

Although some fruit production takes place in all provinces, Ontario is the principal fruit growing region, producing over 40 per cent of the total value of farm sales of fruit in Canada. A large variety of fruits are produced here; the Niagara Peninsula area is noted particularly for the production of tender tree fruits and grapes. British Columbia, too, is famous for its fruit farms. Apples are an important export product; and raspberries, strawberries, loganberries, cherries, peaches, pears, plums and apricots, are also grown in commercial quantities. About one third of the total value of farm sales of fruit in Canada is produced in British Columbia. Apples have been the main fruit crop in Quebec, New Brunswick and Nova Scotia. In recent years raspberries and strawberries are of growing commercial importance in these provinces and also in Prince Edward Island. Although many farms in the Prairie Provinces grow some small fruits, such as raspberries and strawberries, the fruit growing industry is not large in this region. The development of earlier-maturing varieties is allowing a wider distribution of fruit farms in Canada and some commercial fruit production is developing outside of the traditional fruit growing areas.

Fruit Farms in Ontario

Fruit farming is a multimillion dollar industry in Ontario. The large urban population of the Province constitutes a ready market for large quantities of fresh and canned fruit. At the same time a conflict in resource use has arisen with the rapidly expanding urban centers encroaching on prime fruit-growing land. Land values in the better fruit-growing areas are high for this reason and also because of the limited area suitable for fruit production.

Fruit farms vary considerably in size and organization. In comparison with most other types of farms, they are small in area and require a great deal of labor. Some growers of small fruits supplement rainfall with sprinkler irrigation.

Table 18 gives data on capital investment, receipts and expenses for some fruit farms. Because of the small number of farms in the sample, these data should not be considered as anything more than a guide to the capital requirements and organization of farms of this type. About 87 per cent of the total investment was in real estate. Average real estate value per acre was higher than for any other type of farm in Ontario. The high labor requirement for fruit growing enterprises is reflected in the large expenditures for hired labor.

Table 18.– Operating Statements for Some Fruit Farms in Ontario

Number of farms in group	19
Number of acres in farm	36
	– dollars –
Farm capital:	
Land and buildings	64,456
Livestock	1,672
Machinery	9,030
Supplies	852
Total	76,010
Farm receipts:	
Tree fruits	13,598
Grapes	2,980
Small fruits and vegetables	2,721
Livestock and poultry	4,419
Miscellaneous	288
Inventory change - livestock	231
- crops and supplies	268
Total	24,505
Farm expenses:	
Tree fruits - general	2,505
- hired labor	2,746
Grapes - general	374
- hired labor	566
Small fruits and vegetables - general	527
- hired labor	389
Livestock and poultry	3,470
Other hired labor	896
Machinery	1,394
General	1,698
Interest	1,144
Depreciation on buildings and machinery	2,476
Total	18,185
Net farm income	6,320

Source: Adapted from Farm Business Analysis Report, Niagara Peninsula Specialized Fruit Farms, 1965, Ontario Department of Agrilculture and Food, Toronto, Ontario.

Apple Farms in Nova Scotia

Commercial apple production in the Atlantic Provinces is concentrated in the Annapolis Valley in Kings County and parts of the Counties of Annapolis and Hants in Nova Scotia. An average of about 3 million bushels is produced annually. Supplementary enterprises on these apple farms are other tree fruits, vegetables and small fruits, hogs, beef and poultry. An operating statement for some apple farms in Nova Scotia is shown in Table 19.

Table 19.– Operating Statements for Some Apple Farms in Nova Scotia

Number of farms in sample	9
	– acres –
Total farm area	160
Orchard	52
Other improved land	35
Unimproved land area	73
	– dollars –
Total farm capital investment	35,082
Farm receipts:	
Apples	17,897
Other tree fruits	495
Other crops	498
Livestock and poultry	1,379
Miscellaneous	233
Total	20,502
Farm expenses:	
Hired labor	5,552
Spray	1,745
Fertilizer	966
Containers	860
General orchard	360
Truck and tractor operation	891
Custom work including hired trucking	811
Electricity, telephone, insurance	307
Repairs	401
Taxes	280
Livestock	728
Miscellaneous	241
Depreciation on buildings and equipment	1,180
Inventory decrease	297
Total	15,256
Net farm income	5,883

Source: Economics Branch, Canada Department of Agriculture, Truro, Nova Scotia. 1968.

Tree-Fruit Farming in the Creston Valley of British Columbia

The Creston Valley is located in southeastern British Columbia about 470 miles east of Vancouver. Between the south end of Kootenay Lake and the United States boundary there are about 30,000 acres of improved farmland; about 18,000 acres are in the valley bottom and 12,000 acres are benchlands on the east side of the valley.

Tree-fruit production in the Creston Valley is confined to irrigated soils in the northern part of the benchlands. Apples, pears, prunes and cherries are grown but apples comprise more than 90 per cent of the total tree-fruit production. The main apple varieties are McIntosh and Red Delicious, which together make up about 90 per cent of the total shipment of apples from the valley.

There has been a trend towards part-time farming in the orchard area. Industrial expansion in the vicinity of the village of Creston has increased the demand for residential sites. Increased logging and lumber production, the establishment of a brewery and a number of small businesses, have increased the opportunities for non-farm work. Many orchardists have subdivided and sold part of their property and have taken some non-farm employment.

Table 20.– Operating Statements for Tree Fruit Farms in the Creston Valley, British Columbia, 1965

	Full-time[a]	Part-time[a]
Number of farms in group	11	13
Number of acres in farm	19	9.8
Number of acres in orhcard	14	7.8
Number of man equivalents of labor	1.35	1.04
Number of productive-man-work units	345	193
	– dollars –	
Farm capital:		
Land and buildings	30,254	21,874
Livestock	–	67
Machinery and equipment	6,400	3,831
Total	36,654	25,772
Farm receipts:		
Tree fruits	4,369	2,929
Other produce	108	198
Capital sales	145	35
Inventory increase	53	1,306
Total	4,675	4,468
Farms expenses:		
Tree fruit enterprise	505	441
Equipment	544	482
Hired labor	677	452
Real estate	201	158
Capital	972	1,916
Other	86	125
Total	2,985	3,574
Farm income	1,690	894
Non-farm income	1,110	2,981

[a] Full-time orchards were defined as operations requiring more than 250 man-work-units. Those requiring less than 250 work units were classed as part-time.

Source: Economics Branch, Canada Department of Agriculture, Vancouver, British Columbia.

The operating statement in Table 20 shows data on capital investment, receipts and expenses for some full-time and some part-time fruit farms in the Creston Valley. The orchards on the full-time farms were almost twice as large as those on the part-time farms. About 85 per cent of the total capital investment was in land and buildings. The total receipts on the part-time fruit farms were almost equal to those on the full-time fruit farms, mainly because of a larger increase in inventory. However, the part-time farmers had greater capital expenses and a smaller net farm income.

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